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March 20, 1989

TO: Mine File

FROM: Holland Shepherd, Reclamation Specialist HWS

RE: Site Visit to Cane Creek Mine, Moab Salt, M/019/005, Grand County, Utah

Scott Johnson and I visited the Cane Creek Mine the morning of March 16, 1989. Our visit was intended to evaluate new developments centered around the operation's canyon salt collection and retention systems. We met with Mr. Rick Cline, Production Manager for Moab Salt.

Our first stop was the Brine Lake and Salt Storage area. Brine water is impounded behind a 70 foot dike. The dike apparently leaks. A small impoundment has been constructed at its toe. Water is pumped from the small impoundment back to the Brine Lake.

The area is predominantly composed of several million tons of excess salt stored behind the Brine Lake. The operator has initiated a new program to reduce the amount of salt stored at this location by pumping water through the salt, then pumping it back to the mine. The procedure increases the amount of potash recovered from the mine for processing, which makes it a feasible undertaking for the operator at this point in time.

We also visited the brine water collection facilities in 2, 3, and 4 canyons. These canyons concentrate most of the brine escaping from leaks in the evaporation pond and liners. Several impounding structures at the base of these canyons help prevent brine escaping to the Colorado. Brine escape to the Colorado, however, is not totally prevented. These structures leak above and below ground, are under sized, and rapidly silt in creating inadequate retention volumes.

The operator plans to improve these structures, but will not do so until given some direction from the Division. Impoundment size, location, and construction will be forthcoming questions.

The operator has recently constructed a temporary impoundment in between the lower 2 and 3 evaporation ponds. The small impoundment will help to prevent brine from escaping into the top of 3 canyon; before, a steady flow of about 20 gpm, was going directly into 3 canyon.

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We inspected the northern perimeter of the evaporation ponds to determine the feasibility of constructing an undisturbed, drainage, diversion ditch around the ponds. Our inspection revealed that the steepness and rockiness of the terrain would make such construction impracticable. A large amount of runoff has, in the past, developed in the watershed directly to the north of the ponds. This runoff would be intercepted by any impoundment of facilities downstream.

We will be meeting at the end of this month (March 29) with representatives of Moab Salt to discuss concerns over the collection system as well as other permitting concerns developed from the operators latest submittal.

jb cc: Lowell Braxton Scott Johnson Wayne Hedberg MN4/98-99